

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 1/2002	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/RU 02/ 00566	International filing date (day/month/year) 27/12/2002	(Earliest) Priority Date (day/month/year) 29/12/2001
Applicant SKAKUNOV, Yuriy Pavlovich		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☒ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. 1

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/12/00566

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The group of inventions comprises the method for processing of multi-component liquid mixtures (MCLM) and the plant for its implementation. The claimed method of MCLM separation comprises pressurized feeding of hydrocarbon liquid mixture to an ejector nozzle with its further discharging to a vacuum chamber. The novel feature of the method is creation of additional counterpressure jointly with the ejector providing for concentration of power in the vacuum chamber to form a pressure surge. The claimed plant for MCLM processing comprises a feeding pump, a head delivery main, a discharge main, control instrumentation and an evacuating device comprising a horizontal vacuum chamber. The novel feature of the plant is embodiment of the evacuating device as a hydraulic/gas ejector, integrated into the front end wall of the vacuum chamber, the length of which exceeds its cavity diameter by the factor 7 to 10, this plant further comprising a counterpressure regulator connected through a pipeline to the rear end wall of the vacuum chamber, and a vacuum pressure gauge connected to the vacuum chamber in the latter's front section.

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/RU 0566

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C10G7/06 F04F5/54 B01D3/10 B01D3/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C10G F04F B01D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, API Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 277 247 B1 (POPOV SERGUEI A) 21 August 2001 (2001-08-21) claim 1; figure 1	1
A	column 2, line 24-49 column 3, line 18-25 column 4, line 39-64	2-4
A	US 3 373 089 A (VAUTRAIN LUCIEN H ET AL) 12 March 1968 (1968-03-12) figure 1 column 3, line 27-53	1-4
A	GB 2 003 394 A (TZE WEN TAN) 14 March 1979 (1979-03-14) claims 1,4; figure 1 page 1, line 51-81	1-4
	--- -/-	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

30 June 2003

Date of mailing of the international search report

07/07/2003

Name and mailing address of the ISA

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Authorized officer

Harf, J

INTERNATIONAL SEARCH REPORT

In 1st Application No
PCT/RU 90/0566

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 636 324 A (BUCKEYE LAB CORP) 26 April 1950 (1950-04-26) claim 1; figure 1 page 3, line 72-95 -----	1-4

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/RU 02/00566

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 6277247	B1	21-08-2001	RU WO	2124916 C1 9850127 A2	20-01-1999 12-11-1998
US 3373089	A	12-03-1968	NONE		
GB 2003394	A	14-03-1979	NONE		
GB 636324	A	26-04-1950	NONE		

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PTO/SB/08B (08-00)

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

25 JUN 2004

Substitute for Form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number		(U.S. National Phase Appln. based on PCT/RU02/00566)	
				Filing Date		Concomitantly herewith	
				First Named Inventor		SKAKUNOV et al	
				Group Art Unit			
				Examiner Name			
Sheet	2	of	2	Attorney Docket Number		04331/HG	

OTHER DOCUMENTS - NON-PATENT LITERATURE DOCUMENTS

Examiner Initials ¹	Cite No. ¹	Include name of author (in CAPITAL LETTERS), title of article, title of item, date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²				
		SOKOLOV et al, "Jet Devices", <u>ENERGOATOMIZDAT</u> , 3-d edition, Moscow, pp. 278-309 (1989) (Translation, pp. 302-306).	✓				
<table border="1"> <tr> <td>Examiner Signature</td> <td></td> <td>Date Considered</td> <td></td> </tr> </table>				Examiner Signature		Date Considered	
Examiner Signature		Date Considered					

* EXAMINER: Initial if document considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Place a check here if English translation is attached.

DATE MAILED: JUNE 25, 2004